Rock Well Homestead--Dugout
North Rochelle Coal Mine Permit Area
15 mis. SE of Wright
Wright vicinity
Campbell County
Wyoming

HABS No. WY-109-A

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE INFORMATION

Historic American Buildings Survey
National Park Service
U.S. Department of the Interior
Washington, D.C. 20013

HISTORIC AMERICAN BUILDINGS SURVEY

ROCK WELL HOMESTEAD--DUGOUT

HABS No. WY-109-A

HABS WYO 3-WRT.V 1A-

Location: North Rochelle Coal Mine Permit Area, 15 miles southeast of Wright, Wright vicinity, Campbell County, Wyoming. E-1/2/NW/NW/NW, W-1/2/NW/NE/NW/NW Section 14, T42N-R70W.

USGS Piney Canyon SW, Wyoming, Quadrangle, UTM Coordinates: A.13.480720E.4822964N. B.13.480720E.4829495N. C.13.480560E.4829495N. D.13.480560E.4829640N.

Present Owner: Shell Mining Company, Houston, Texas.

Present Use: Abandoned.

Significance: The Rock Well or Thornburg Homestead is associated with early twentieth-century dry-land farming and ranching on the semi-arid lands of Campbell County. The stone dugout represents one of the best-preserved examples of this kind of dwelling in northeastern Wyoming. It is still in good physical condition and is unusually well crafted.

PART I. HISTORICAL INFORMATION

A. Physical History

The dugout was probably constructed by Jack Thornburg sometime between 1920 and 1937. However, it is also possible that the former resident, Hartwell B. Kelley, built the dugout during his occupancy between 1917 and 1919. It is likely that Kelley and/or Thornburg resided in the dugout for an undocumented period of time. However, Feature E (see HABS No. WY-109) consists of what is obviously the remnants of a wood-frame dwelling. It is now impossible to determine the building sequence on the homestead. Certainly the dugout was last used for food storage only, and the paucity of associated artifacts do not indicate long-term occupation. Remaining site evidence suggests that Thornburg could have resided in the dugout for an unknown period of time until he was able to build a larger wood-frame dwelling. The dugout is well crafted, and more time and care were spent on its construction than the typical root cellar would warrant. Secondly, the well for the homestead is located in close proximity.

Another indication that the dugout was used as a dwelling for at least a short period of time is the remnants of a wood-frame vestibule or addition on the east elevation of the dugout. It appears that the floor was composed of large diameter flagstones. A copper grounding rod is still in place at this location. Associated artifacts consist of a paint can with a wire handle, oxidized tin can fragments, six or more clear bottle glass fragments, and round or wire nails.

B. History of Dugouts

When the early pioneers moved westward onto the Great Plains and high plains of Wyoming, there was a scarcity of readily available timber for building. Therefore, the homesteaders were forced to use the materials at hand, prairie sod and stone. It was important for the settler to provide shelter from the elements as soon as possible. Although the Rock Well Homestead features a stone dugout, the history of this type of structure has its origins in the sod-brick house or dugout of the Great Plains region. It was here that the sod house or dugout evolved, a structure peculiar to the prairie region. The sod house was constructed from sod bricks carefully cut from the thick prairie sod. The basis of this dwelling was the dugout. The sod house or dugout was easy to construct because it was dug into a bank, eliminating the need to build complete walls, and it could be easily roofed over. The average life of a sod house or dugout was six to seven years. By this time, the homesteader often had established his fields, fenced his land, and acquired enough income to construct a more permanent dwelling. However, it was not uncommon for homesteaders, especially bachelors, to continue living in sod houses or dugouts for an extended period of time.[1]

A dugout site was typically chosen on the side of a hill or a ravine along a water course. The bank chosen was steep and at least 5' to 6' high. The homesteader dug a hole measuring approximately 10' x 14', and generally no larger than 12' x 18'.[2]

Sod bricks were made by plowing a low-lying area where the sod was moist. A spade was used to cut the sod into bricks about 3' long. The sod bricks were placed side by side to form the front of the dugout, every other layer placed crosswise to provide better binding. Dirt was used as filler, or sticks were driven down into the walls to provide reinforcement. The longer wall was parallel to the face of the ravine. The rear wall was the natural wall of the bank. The excavation was ordinarily completed in a few days.

Logs, poles, brush, and grass were utilized to finish the roof and front of the dugout. Several logs or posts for a door frame were securely driven into the soil. If enough wood was found, the homesteader fashioned a window frame for the front wall, next to the door. The front wall was made of square-cut sod, or less frequently, logs or

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[1]Everett Dick, The Sod-House Frontier, 1854-1890 (Lincoln, Nebraska: University of Nebraska Press, 1954, 1979), 112; portions of this discussion are abstracted from Dena S. Markoff, "Historical Assessment of the Rock Well Homestead, North Rochelle Mine, Campbell County, Wyoming" (Boulder, Colorado: Western Cultural Resource Management, Inc., August 1981), 6-13.

[2]Veda Giezentanner, "In Dugouts and Sod Houses," Chronicles of Oklahoma 42 (Spring 1964): 142.

stone. The door and window were fitted into the front wall. Side walls were partially formed from the solid bank of the ravine, and were sometimes supplemented by cut sod squares or logs to prevent caving.

The longest pole available served as a ridgepole and was placed across the dugout parallel to the ravine. If the sod walls did not support the ridgepole, two or three supporting posts with forks at the top were placed under the ridgepole to support its weight. Rafters perpendicular to the main support pole were placed about 1' apart, similar to the placement of the rafters on a house. Brush and layers of prairie grass covered these rafters. A thick layer of dirt was then spread over this foundation. Occasionally, the builder cut sod squares similar to those that made up the front and side walls and placed them on top of the brush and grass. During times of heavy rainfall, a sod roof was not waterproof, so the pioneer dug a trench across the floor of the dugout to drain it.

The front door may have been constructed of wood and secured to the door jamb with leather hinges. If wood was not available, a blanket, piece of muslin, or the cotton or canvas that covered the settler's "prairie schooner" was used. Oiled paper, cheese cloth, muslin, or animal skins served as window panes. It was a common practice for the homesteader to stretch muslin across the ceiling to prevent dirt and insects from falling into the shelter.

The floors of the dugouts generally were hard-packed earth, which after a short period of time could be swept clean. Wooden floors were rarely installed, due to the scarcity of wood and frequent dripping rain, which could warp wooden floors and render them more of a nuisance than a luxury. Many homemakers placed rugs or skins over the floor.

Interior walls were finished in many ways. Typically, they were smoothed down and plastered with a mixture of clay and ashes. Whitewash applied to this plaster made the room more cheerful and bright. If rock or shale were available, many homesteaders lined the interior walls with rock. Settlers often papered the interior walls with pages from catalogs, newspapers, or letters, a practice also common in log cabins to reduce drafts.[3]

The layout of a dugout was simple--one large room in which the homesteader and his family lived, ate, slept, and cooked. On one side of the room, the owner usually constructed a fireplace and chimney built of brick-like blocks of turf. Usually one section of stovepipe

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[3]Dick, 110-118; Nathaniel M. Ayers, Building a New Empire (New York: Broadway Publishing Co., 1910), 57-58; Giezentanner, 140-149; "A Western Dugout," Georgetown (Colo.) Courier, February 25, 1886; "How a Dugout is Constructed," Field and Farm, August 3, 1895, 6; John R. Spears, "Odd American Homes," Scribner's Magazine 10 (September 1891), 308-318.

projected through the roof into the open air. If the homesteader did not bring furniture west, he built his own. Many accounts refer to the construction of beds against one wall, usually across from the stove or fireplace. One Nebraska woman stated that "bedsteads can be made of forked poles driven in the ground with sticks laid across them."[4] Chairs, benches, and shelving were constructed from lumber, kegs, or packing boxes. One author described his parents' dugout by stating that, "since they owned no furniture, they dug a 3'-wide shelf around the whole room which they used for chairs, dining table, beds and miscellaneous shelves."[5]

A rain barrel next to the dugout was a common sight, since only a few homestead claimants were fortunate enough to locate near a permanent water source. As soon as possible, the homesteader dug a well and cistern.

C. Life in a Dugout

Although life in a sod dugout had many disadvantages, there were several inherent advantages to a dugout in the open plains. It offered better protection to the high winds that were common on the plains. It was a natural haven for protection against cyclones and tornadoes.[6] At least a few livestock could be brought into a dugout in severe storms. A sod dugout was safer in the event of prairie fires. It was also easier to heat in winter and was naturally cool in the intense summer heat.

A dugout was also the cheapest structure to build. One Nebraska pioneer estimated that his dugout built in 1872 cost only $2.78. The expenses included: lumber for window and door (including glass), $1.79; latch and hinges, $.50; stovepipe, $.30; and nails, $.39.[7]

Unfortunately, the dugout presented many problems and inconveniences for its occupants. The chief disadvantage was the porosity of the roof. After a heavy rain, many dwellers were driven from their homes. Since the dugout was by necessity located on the side of a ravine or hill, water after rains collected by the front door. Mosquitoes were annoying in summer, and the standing water provided an unhealthy environment. Many times all household articles had to be removed from the dugout after a rain and dried. During storms, pots and pans were placed all about the room in a fruitless attempt to catch the dripping water. One

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[4]"A Western Dugout," Georgetown Courier, February 25, 1886, 1:6.

[5]"How a Dugout is Constructed," Field and Farm, August 3, 1895, 6.

[6]Talbot F. Hamlin, The American Spirit in Architecture, vol. 13 of The Pageant of America (New Haven: Yale University Press, 1926), 147.

[7]Dick, 114.

woman recounted cooking over the stove while someone held an umbrella over her head. It was not uncommon for the roof of the sod house to become soaked and to collapse under the added weight.[8]

Ventilation was poor in a dugout. One Nebraska woman stated that the window or door should be left open as much as possible to provide ventilation. This could prove to be a dangerous practice for such unwanted intruders as snakes, animals, and Indians.

Insects and snakes were a constant torment to the dugout dweller. The muslin draped over the ceiling to catch the falling dirt also caught falling insects. One pioneer woman heard a rattlesnake in her dugout. She tied a hen to a table leg to locate it; when the snake crawled out to eat the chicken, she killed it.[9]

Another hazard was livestock wandering onto the roof of the dugout, either causing the roof to collapse or falling through it. Once grass and flowers became established on the roof sod, the dugout could not be easily seen by a passing traveler. It was not uncommon for a traveler to drive right over the dugout.[10] A livery stable owner in Vernon, Texas, told the writer for Scribner's Magazine that he drove over such a dwelling and wondered what made the ground so uneven, until the proprietor of the dugout came out with a Winchester in hand.[11]

Due to the many disadvantages of a dugout, a man sheltered his wife and family in a dugout for as short a time as possible. According to an article in the Wichita Morning Eagle, "The man who kept his family in a dugout for more than two or three years was considered shiftless."[12] Many women objected strenuously to living in a dugout. One Nebraska woman burst into tears when she saw the shelter for the first time. A Kansas pioneer woman stated she would not live in a hole in the ground like a prairie dog.[13]

Accounts of dugout life indicate that it was not uncommon for bachelors to reside in a dugout for several years. One correspondent visited a dugout in Kansas in 1873 and wrote, "the bachelor who owned the dugout

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[8]Dick, 114-115.

[9]Giezentanner, 148.

[10]Dick, 112.

[11]Spears, 309.

[12]Wichita Morning Eagle, November 25, 1906, from Kansas State Historical Society Clipping File, vol. 3.

[13]Dick, 111.

will probably live there until he gets 30 or 40 acres under cultivation, increases considerably his livestock and saves a sufficient sum to pay for a finer house and belongings."[14] Evidently, the bachelor was able to reside much longer in a dugout without the social pressure of removing a wife or family from such a dwelling.

PART II. DESCRIPTIVE INFORMATION

The one-room dugout, measuring 10'-7" on a side, is excavated into the northeast slope of a gentle ridge, overlooking an unnamed drainage to the east. It is constructed with rough-dressed dry-laid sandstone blocks carefully laid in rough courses. The entrance faces east-northeast and is composed of a recessed entranceway constructed from sandstone measuring about 6' deep and 4'-3" wide. The wood plank door is sturdily built and measures 3'-9" high and 2'-4" wide. It is attached to the door jambs with two metal hinges. The door jambs are constructed with hand-hewn timbers. The structure is windowless. The roof is constructed with large slab or half logs covered with dirt and supported by three full logs (14" in diameter). There is a stovepipe section located in the west-central portion of the roof, and the interior has a packed dirt floor. It is impossible to stand erect inside the structure, and the interior dimensions are quite small. However, dirt has accumulated on the floor and against the partially opened front door, indicating that the floor was once deeper. The interior is devoid of improvements except for what appear to be log and wood shelves built into the north wall. The shelves were constructed by nailing vertical logs to the log roof supports and nailing horizontal wood studs that support boards laid across the shelves.

PART III. PROJECT INFORMATION

The history was compiled by Robert Rosenberg, Rosenberg Historical Consultants, Cheyenne, Wyoming, in January 1990.

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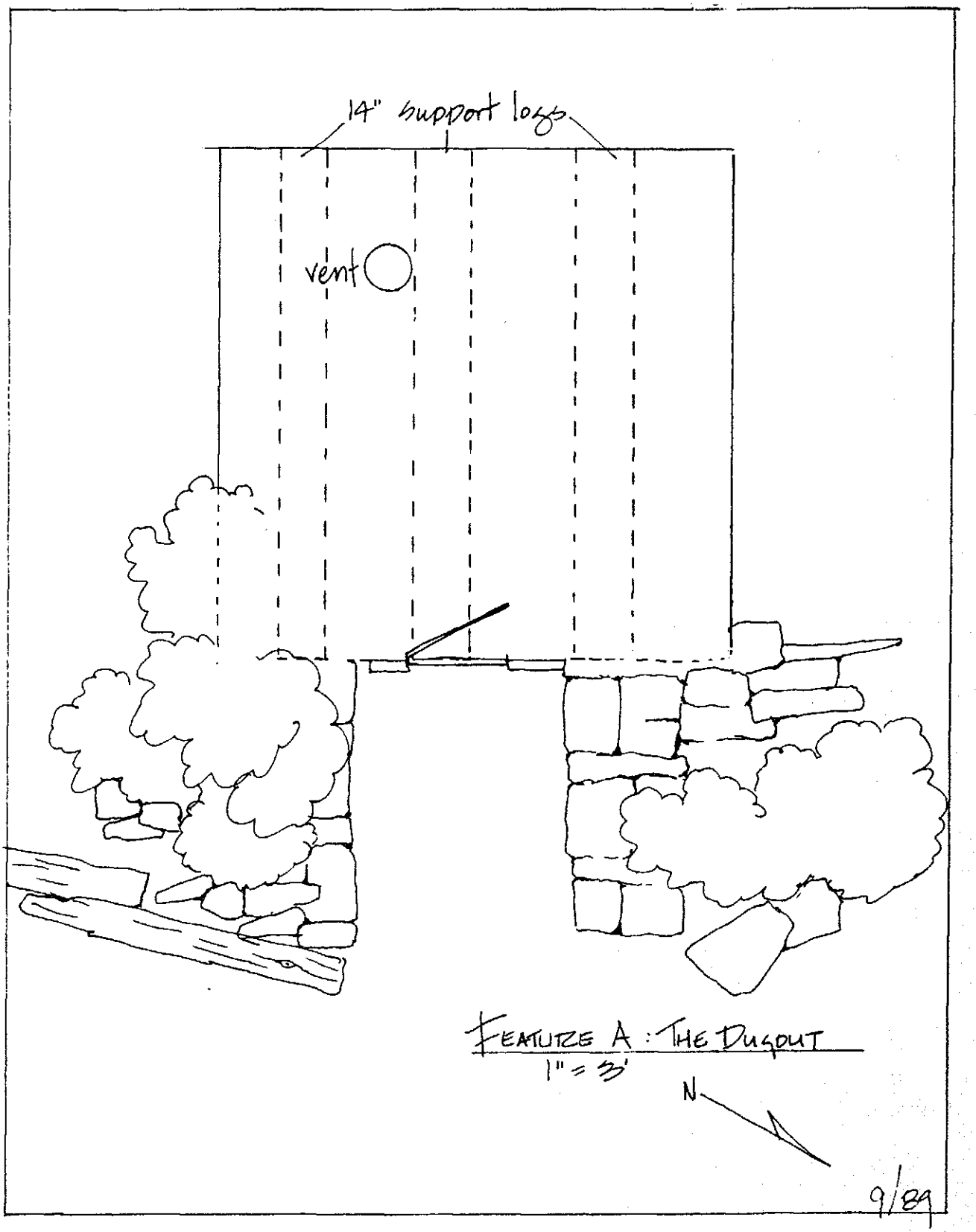
[14]The Field (London, June 7, 1873): 544, from Kansas State Historical Society Clipping File.


14" support logs
vent
FEATURE A: THE DUGOUT
1" = 3'
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